Lucanet 24.1 – Installing a Lucanet Server Under Linux

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Overview

From the very outset, LucaNet.**Software Manager** must be installed onto every computer that the LucaNet software is to operate on. LucaNet.**Software Manager** administrates all the LucaNet programs running on a computer and all the Java versions required by these programs with the exception of LucaNet.**Web Client**.

Instructions

To install LucaNet software components for the LucaNet server under Linux:

1. Download the installation file for online installation from the **Online Installation** area at **https://customer.lucanet.com/en/lucanet-24-1/downloads** for LucaNet.**Software Manager**.
2. Install LucaNet.**Software Manager** (see **Installing LucaNet.Software Manager**).
3. Install LucaNet.**Financial OLAP Server** (see **Installing LucaNet.Financial OLAP Server**).
4. Install LucaNet.**Server Administrator** (see **Installing LucaNet.Server Administrator**).
5. Activate the LucaNet license in LucaNet.**Server Administrator** (see **Activating LucaNet software**).
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2 Installing LucaNet.Software Manager

Instructions

The installation of LucaNet.**Software Manager** under Linux is carried out via a console and consists of two steps:

1. Downloading the installation file (see subheading *Downloading LucaNet.Software Manager*)
2. Installation of LucaNet.**Software Manager** (see *Installing LucaNet.Software Manager*)

Downloading LucaNet.Software Manager

Do one of the following to download the installation file:

- For **Linux version with GUI**:
  1. Download the installation file from the **Online Installation** area at **https://customer.lucanet.com/en/lucanet-24-1/downloads**.
  2. Save the file in any directory.

- For **Linux version without GUI**:
  1. On a computer with a GUI, open **https://customer.lucanet.com/de/lucanet-24-1/downloads**.
  2. Under **Online Installation | Linux**, right-click **Installation File** and choose **Copy link address** from the context menu to copy the link to the installation file to the clipboard.
  3. Use **Putty**, for example, to connect to the desired Linux system in order to access the shell of the system.
  4. Type the command **wget** or the command **curl** and paste the link from the clipboard to download the installation file.

Installing LucaNet.Software Manager

To install LucaNet.**Software Manager** under Linux:

1. Start a terminal, e.g. with **Applications | System tools | Terminal**.

2. Switch over to the directory in which the installation file is saved, e.g. in the **Downloads** directory, with the command:
   ```
   cd Downloads/
   ```

3. If necessary, define the file rights with the following command:
   ```
   chmod 755 LucaNet.SoftwareManager_Installer.sh
   ```
   Note: The permissions of the **owner** to reading, writing and executing (rwx), of the **group** to reading and writing (rx) and of the **other users** to reading and execution (rx) are set with **chmod 755**. If you wish to assign the file permissions differently, then you must modify the command accordingly.

4. LucaNet.**Software Manager** is installed using an interactive console wizard. For experienced users, there is also the option to start the installation file with a single command line call without any further interaction. Do one of the following:

   - Installation **with** wizard Proceed as follows:

     1. Start the installation with the following command:
        ```
        ./LucaNet.SoftwareManager_Installer.sh
        ```
        Note: Executing the installer root permissions.

     2. Specify the installation directory for LucaNet.**Software Manager** . Do one of the following:

        - Press **Enter** to apply the displayed default installation directory.
        - Specify a user-defined installation directory and confirm your entry with **Enter**.

   - Installation with default values **without** wizard. Proceed as follows:

     1. Start the installation with the following command:
        ```
        ./LucaNet.SoftwareManager_Installer.sh --default
        ```
        Note: Executing the installer root permissions.

     2. If necessary, use the following command to display the help for the wizard:
        ```
        ./LucaNet.SoftwareManager_Installer.sh --help
        ```

5. Follow the instructions in the console. After successful installation, LucaNet.**Software Manager** is available on the computer. The selected configuration is logged and the log file is saved under the following path:
   ```
   /opt/LucaNet/Youniverse/programdata/.users/<user>/.manager/log/installer.log
   ```

Directories

The following directories are created during installation:

Installation directory:	The location of the installation directory depends on the distribution. This directory contains the immutable components of LucaNet.**Software Manager** and the JDK. The directory is created during execution of the setup program. The directory contains the following sub-directories:

Directory	Content
.bin	Contains all executable files that are not intended for direct use by a user
.computer	Contains the unique ID of the installation **Caution**: The **.computer** directory contains the **computer.ln1** file. Please note that the **computer.ln1** file identifies all LucaNet installations on your computer. If the file is lost or damaged, the entire LucaNet installation on your computer will be **irrevocably destroyed!**

		The **computer.ln1** file must therefore be saved locally in a secure location.
	.jdk	Contains the current OpenJDK (such as Java Runtime Environment) The JDK_ID is composed of *<vendor>*+*<version>*.
	.resources	Contains all program resources of all programs across programs and installations

Program data directory:	[install dir]/programdata/ This directory contains all of the components of LucaNet.**Financial OLAP Server** that can be modified: The directory contains the following sub-directories:

Directory	Content
.data	Contains the system database(s) of LucaNet.**Financial OLAP Server**(s)
.resources	Contains all program resources of all programs across programs and installations
.users/<user>/.manager	- The **config** subfolder contains the user-dependent configuration - The **log** subfolder contains the user-dependent log files

Updating LucaNet.Software Manager

Upon each startup of LucaNet.**Software Manager**, a verification takes place as to whether an update is available. In the event of an update, LucaNet.**Software Manager** is updated automatically via LucaNet.**Financial OLAP Server**.

Configuring LucaNet.Software Manager

Information on how to configure LucaNet.**Software Manager** can be found in the online help under **Technical information | LucaNet.Software Manager**.

3 Installing LucaNet.Financial OLAP Server

Overview

LucaNet.**Financial OLAP Server** is the server component of the LucaNet software. Under Linux, after installing LucaNet.**Software Manager** , you can install LucaNet.**Financial OLAP Server** as a service or as an application.

Notes:

- The installation of LucaNet.**Financial OLAP Server** for Linux **CentOS** as of version 6.4 is described as an example in the following. The menu commands used and the command syntax used in other Linux distributions may vary.
- **CentOS** must be running at least in Runlevel **default.target** in order for clients in the network to access the LucaNet.**Financial OLAP Server**. The required Runlevel may differ with other Linux distributions.
- The installation of LucaNet.**Financial OLAP Server** as a service requires the presence of **systemd** .

Installing LucaNet.Financial OLAP Server

LucaNet.**Financial OLAP Server** can be installed using an interactive console wizard. For experienced users, there is also the option to start the installation file with a single command line call without any further interaction. Do one of the following to install LucaNet.**Financial OLAP Server** under CentOS:

1. Start a terminal, e.g. with **Applications | System tools | Terminal**.
2. Do one of the following:

   - Installation **with** wizard Proceed as follows:

     1. Start the installation with the following command:
        `/opt/LucaNet/Youniverse/program/LucaNetConsole install`
        Note: Executing the installer root permissions.
     2. The wizard guides you through the installation and queries all configurable parameters one after the other. Choose one of the following options for each step:

        - Press **Enter** to apply the displayed default value for a parameter.
        - Press **Enter** to skip an optional parameter.
        - Specify a user-defined value and confirm your entries with **Enter**.

     3. Close the wizard using **Enter** when you have configured all parameters.
        Note: Finally, the selected installation configuration is displayed in the form of a command. If necessary, copy the displayed command to perform additional installations with the same configuration.
     4. Confirm the displayed prompt with **Enter** to start the installation.

   - Installation as **desktop application without** wizard. Proceed as follows:

     - Start the installation with the following command:
       `/opt/LucaNet/Youniverse/program/LucaNetConsole install -host=https://youniverse.lucanet.com -programID=LNFOS`
       Note: Executing the installer root permissions.

   - Installation as a **service without** wizard. The installation as a service ensures that the installed LucaNet.**Financial OLAP Server** starts automatically when the operating system is booted and runs in the background without a graphical user interface. Proceed as follows:

     - Start the installation with the following command:
       `/opt/LucaNet/Youniverse/program/LucaNetConsole install -host=https://youniverse.lucanet.com -programID=LNFOS -service`

3. Follow the instructions in the console.
4. If necessary, verify the correct installation and the installation ID of LucaNet.**Financial OLAP Server** with the following command:
   `/opt/LucaNet/Youniverse/program/LucaNetConsole list`

Notes

- To install LucaNet.**Financial OLAP Server**, the computer must have an Internet connection.
- You can display all installation parameters with the following command:
  `/opt/LucaNet/Youniverse/program/LucaNetConsole help`
- When installation carried out via console, LucaNet.**Financial OLAP Server** is automatically assigned **Port 80**. The IP address and/or port can also be entered or altered after installation in LucaNet.**Server Administrator** (see **Ports** section in the LucaNet online help). Please note that the port under which LucaNet runs must be open in the local firewall.

- The installation ID of the LucaNet.**Financial OLAP Server** installation can be displayed with the following command:
  ```
  /opt/LucaNet/Youniverse/program/LucaNetConsole list
  ```

- If you have installed LucaNet.**Financial OLAP Server** as a desktop application, you can subsequently register it as a service using the following command:
  ```
  LucaNetConsole installservice -installationID=<installation ID>
  ```
  Notes:

  - **<installation ID>** stands for **LNFOS** or for **LNFOS-2**, for example.

  - The section **Integrating the LucaNet daemon manually** describes how to manually integrate and register the LucaNet.**Financial OLAP Server** with **systemd** and **CentOS** 7.0 or higher subsequently.

- If you are using a headless operating system and want to create **Excel files** with the LucaNet software, make sure the fonts are installed on your computer, otherwise errors may arise when you create the files. You can download fonts using the following command, for example:
  ```
  yum install fontconfig
  ```

Directories

The following directories are created during installation:

Installation directory:	Server applications are administrated by LucaNet.**Software Manager** and therefore do not have their own installation directory.
Program data directory:	[install dir]/programdata/LNFOS/ This directory contains all of the components of LucaNet.**Financial OLAP Server** that can be modified. The directory contains the following sub-directories:

Directory	Content
[*release ID*] + [*version ID*]	Contains all program files of LucaNet.**Financial OLAP Server**
log	Contains log files
temp	Contains temporary files

3.1 Integrating the LucaNet demon manually

Overview

LucaNet must be integrated as a **daemon** in order to have it start automatically when CentOS starts up. LucaNet.**Financial OLAP Server** is automatically integrated and registered as a service during installation (see section **Installing LucaNet.Financial OLAP Server**). If you want to integrate and register LucaNet.**Financial OLAP Server** with **systemd** and **CentOS** 7.0 or higher, you can find the instructions here.

Caution: The integration of the LucaNet demon must take place with root permissions!

Instructions

To integrate the LucaNet daemon with **systemd** and **CentOS** from 7.0:

1. Start a terminal, e.g. with **Applications | System tools | Terminal**.
2. Use the command **su** to switch to the root context.
3. Enter the root password and press **Enter**.

4. Create a **service file** with the following content under /etc/systemd/system/*<serviceName>.service* :

```
[Unit]
Description=LucaNet.FinancialOLAPServer Service # or other identifier
[Service]
Type=simple
ExecStart=/opt/LucaNet/Youniverse/program/.bin/LucaNet LNFOS -service # if necessary,
adjust path or installation ID according to the installation
GuessMainPID=yes
RemainAfterExit=no
Restart=always
User=<user name of installation>
[Install]
WantedBy=default.target
```

5. Use the following command to tell **systemd** that a new **service file** exists:
   systemctl daemon-reload

6. Activate the LucaNet service with the following command:
   systemctl enable <serviceName>.service

7. Edit the **JRE parameters** for LucaNet.**Financial OLAP Server**:

   1. Generate the following file:
      /opt/LucaNet/Youniverse/programdata/LNFOS/<SwReleaseDir>/CustomizedJDKParameters.ln4

   2. In the file **CustomizedJDKParameters.ln4**, specify that the server shuts itself down upon restart and is started anew from **systemd**. Enter the following parameters:
      externalRestart=-Dexternalrestart=true

8. Start the LucaNet service with the following command:
   systemctl start <serviceName>.service

9. Verify that the service has the correct status with the following command:
   systemctl status <serviceName>.service

   The output must contain **Active: active (running)**.

Notes

- **CentOS** must be running at least in Runlevel **default.target** in order for clients in the network to access the LucaNet.**Financial OLAP Server**. The required Runlevel may differ with other Linux distributions.
- Please note that the port under which LucaNet runs must be open in the local firewall.
- The installation ID of the LucaNet.**Financial OLAP Server** installation can be displayed with the following command:
  /opt/LucaNet/Youniverse/program/LucaNetConsole list

4 Installing LucaNet.Server Administrator

Overview

LucaNet.**Server Administrator** is the LucaNet user interface for the administration of LucaNet.**Financial OLAP Server**.

As soon as LucaNet.**Financial OLAP Server** is installed, you can install and start LucaNet.**Server Administrator** . LucaNet.**Server Administrator** can be installed in LucaNet.**Software Manager** or via LucaNet.**Financial OLAP Server**.
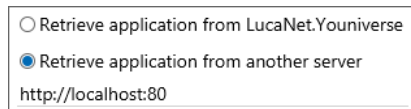
Note: If you are using a Linux distribution without a graphical user interface, you must install and run LucaNet.

Server Administrator on another computer (Linux distribution with graphical user interface, MS Windows, or with macOS). In this case, you must first install LucaNet.**Software Manager** on the computer that LucaNet.**Server Administrator** is installed on.

Installing LucaNet.Server Administrator in LucaNet.Software Manager

To install LucaNet.**Server Administrator** in LucaNet.**Software Manager**:
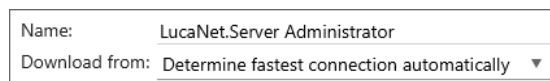
1. Start LucaNet.**Software Manager**.

2. Start LucaNet.**Financial OLAP Server**.

3. Click the **Install application** tab in LucaNet.**Software Manager**.

4. Choose **Retrieve application from another server** and specify the URL of the LucaNet.**Financial OLAP Server** (e.g. **http://localhost:80**) in the displayed input field:

   ○ Retrieve application from LucaNet.Youniverse

   ● Retrieve application from another server

   http://localhost:80

   Note: If you are not installing LucaNet.**Server Administrator** on the computer that LucaNet.**Financial OLAP Server** is installed on, specify the following URL: http(s)://*<LucaNet server address>*:*<LucaNet server port>*/

5. Click **Next**.
   LucaNet.**Software Manager** displays the available applications.

6. Choose LucaNet.**Server Administrator** and click **Next**.

7. If necessary, change the displayed name in the **Name** input field:

   Name: LucaNet.Server Administrator
   Download from: Determine fastest connection automatically ▾

8. From the **Download from** drop-down list, select the download server LucaNet.**Server Adminstrator** is to be installed from. The following options are available:

   - Choose **Determine fastest connection automatically** if LucaNet.**Software Manager** shall determine the download server automatically.
     Note: If you want to exclude downloads from one or more servers when selecting the **Determine fastest connection automatically** option, you may have to block the URL(s) in question in your company's firewall (see subheading *Download server for LucaNet software components*). Alternatively, explicitly select one of the specified servers from the **Download from** drop-down list.
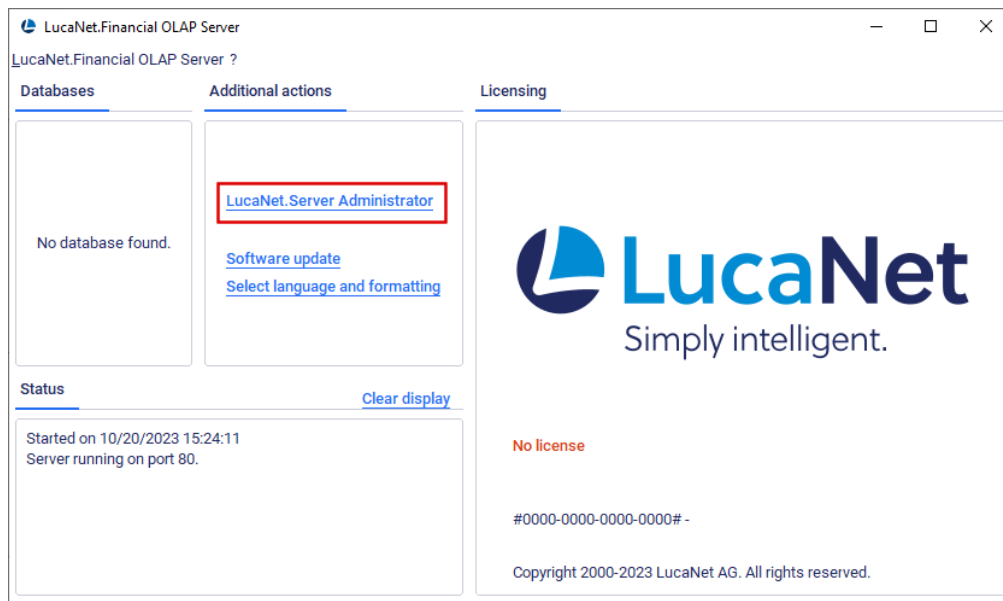   - Choose the desired download server from the drop-down list.

Server URL	Server location
Address of the server specified in step 4	Depending on installation location of LucaNet.**Financial OLAP Server**
https://cdn.lucanet.com/resources/	worldwide (without China)
https://cdn.lucanet.cn/resources/	China

9. Click **Install**.
   LucaNet.**Server Administrator** is installed.

10. Click **Finish**.
    LucaNet.**Server Administrator** is displayed under **My applications**.

11. Start LucaNet.**Server Administrator**.

12. Retain the displayed user name and enter the password for LucaNet.**Server Administrator**.
    Note: The initial password for LucaNet.**Server Administrator** is **simsalabim**. When you log in for the first time, you must change the password.

Installing LucaNet.Server Administrator via LucaNet.Financial OLAP Server

If LucaNet.**Financial OLAP Server** is installed as an application, you can install LucaNet.**Server Administrator** via LucaNet.**Financial OLAP Server** as follows:

1. Start LucaNet.**Software Manager**.
2. Start LucaNet.**Financial OLAP Server**.
3. Click LucaNet.**Server Administrator** in the start window of LucaNet.**Financial OLAP Server**.

> LucaNet.**Server Administrator** is installed and opened. LucaNet.**Server Administrator** is automatically entered in LucaNet.**Software Manager** under **My applications**.

4. You can then start LucaNet.**Server Administrator** from LucaNet.**Software Manager** by also clicking **Start**.

Download server for LucaNet software components

The LucaNet software is distributed via a **CDN (Content Delivery Network)** . During the installation of the LucaNet components, the installation files are downloaded from the server that is the fastest to reach from your location. For the installation files of the LucaNet components, available servers are searched for using the following server URLs:

Server URL	Server location
https://youniverse.lucanet.com/	Germany
https://cdn.lucanet.com/resources/	worldwide (without China)
https://cdn.lucanet.cn/resources/	China

Directories

The following directories are created during installation:

Installation directory:	Client applications are administrated by LucaNet.**Software Manager** and therefore do not have their own installation directory.
Program data directory:	The directory can be found under the following path:

Operating system	Path
Linux (with graphical user interface)	/opt/LucaNet/Youniverse/programdatadir/.users/*<User>*/*<Server>*/LNSA/
MS Windows	*<ProgramDataDir>*/.users/*<User>*/*<Server>*/LNSA/
macOS	/Users/Shared/LucaNet/Youniverse/.users/*<User>*/*<Server>*/LNSA

The directory contains the following sub-directories:

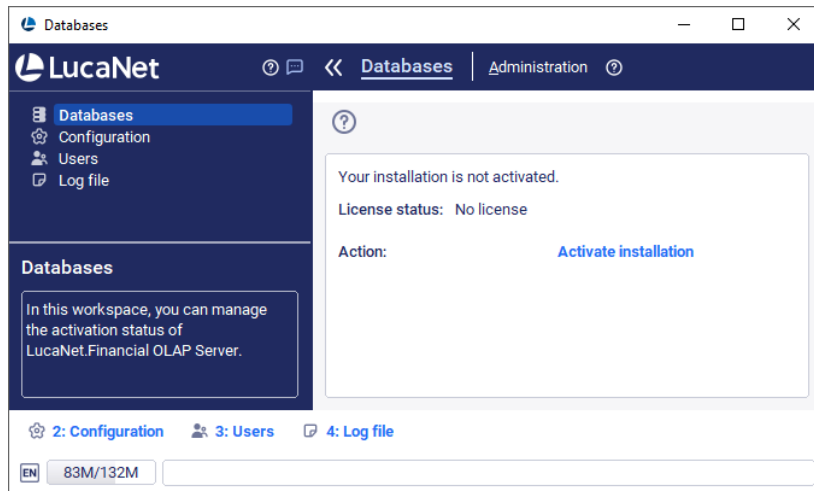| Directory	Content
config	Contains configuration files
link	Contains desktop icon
log	Contains log files
temp	Temporary directory

5 Activating LucaNet software

Overview

After installing LucaNet.**Financial OLAP Server** and LucaNet.**Server Administrator**, the LucaNet software must be activated. LucaNet.**Financial OLAP Server** is activated in LucaNet.**Server Administrator** by using an activation code. You receive the activation code via e-mail from LucaNet.

Note: To be able to activate LucaNet.**Financial OLAP Server**, LucaNet.**Server Administrator** must have an Internet connection.

Instructions

To activate a new installation:

1. If necessary, start LucaNet.**Software Manager**.
2. Start LucaNet.**Financial OLAP Server** from LucaNet.**Software Manager**, when installing LucaNet.**Financial OLAP Server** as an application. If LucaNet.**Financial OLAP Server** is installed as a service, you must ensure that the service is started.
3. Start LucaNet.**Server Administrator** from LucaNet.**Software Manager**. LucaNet.**Server Administrator** is displayed as follows:

4. Click **Activate installation**.
   The **Activate installation** dialog is displayed.
5. In the **Activation code** input field, specify the activation code that you received from LucaNet and click **OK**.
   After successful transmission of a valid activation code to the LucaNet license server, the status of the license changes to **Activated** and LucaNet.**Financial OLAP Server** is ready for use.

6 Updating LucaNet programs

To update LucaNet programs, you must update LucaNet.**Financial OLAP Server**. The components LucaNet.**Software Manager**, LucaNet.**Server Administrator**, LucaNet.**Financial Client**, and LucaNet.**Auto Task Client** check during startup whether the associated LucaNet.**Financial OLAP Server** has been updated. If LucaNet.**Financial OLAP Server** has been updated, all the other LucaNet software components are automatically updated when they are started.

Updating LucaNet.Financial OLAP Server

LucaNet.**Financial OLAP Server** can be updated manually from LucaNet.**Server Administrator** or automatically via job control:

- The following options are available for manual updating:
    - Direct update of LucaNet.**Financial OLAP Server**
    - Update via LucaNet.**Server Administrator**

  You can find the description of these update options in the online help under **Complete Description | Administration | Administration at the system level | Administration | Performing a software update**.
- LucaNet.**Financial OLAP Server** can be updated automatically at any time using a corresponding job in LucaNet.**Server Administrator**. In the configuration of the job, it can be defined to which release an automatic update is to be performed, and whether service packs are to be automatically installed or not.
- For information on creating and configuring an update job, see the online help under **Complete Description | Administration | Administration at the system level | Job Control | Jobs | Restart the server**.